

Examiner Search Report

9/30/04

09/731,632

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(FILE 'HOME' ENTERED AT 10:48:03 ON 30 SEP 2004)

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, AQUALINE, ANABSTR, ANTE, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DISSABS, DDFB, DDFU, DGENE, ...' ENTERED AT 10:48:16 ON 30 SEP 2004
SEA CYCLOOXYGENASE OR COX

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L1 QUE CYCLOOXYGENASE OR COX

FILE 'PROMT, BIOSIS, MEDLINE, EMBASE, SCISEARCH, CAPLUS, TOXCENTER,
PASCAL, ESBIODBASE, DRUGU, CANCERLIT' ENTERED AT 10:50:40 ON 30 SEP 2004

L2	524 S L1 AND OSTEOSARCOMA
L3	5 S L2 AND (143.98.2)
L4	2 DUP REM L3 (3 DUPLICATES REMOVED)

=> d l4 ibib ab 1-2

L4 ANSWER 1 OF 2 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 97239482 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9085144
TITLE: Characterization of autocrine inducible prostaglandin H
synthase-2 (PGHS-2) in human **osteosarcoma** cells.
AUTHOR: Wong E; DeLuca C; Boily C; Charleson S; Cromlish W; Denis
D; Kargman S; Kennedy B P; Ouellet M; Skorey K; O'Neill G
P; Vickers P J; Riendeau D
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Merck
Frosst Centre for Therapeutic Research,
Pointe-Claire-Dorval, Quebec, Canada.
SOURCE: Inflammation research : official journal of the European
Histamine Research Society ... [et al.], (1997 Feb) 46 (2)
51-9.
Journal code: 9508160. ISSN: 1023-3830.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970620
Last Updated on STN: 19970620
Entered Medline: 19970612

AB The human **osteosarcoma** 143.98.2
cell line was found to express high levels of prostaglandin synthase-2
(PGHS-2) without detectable levels of prostaglandin synthase-1 (PGHS-1) as
measured by reverse transcriptase-polymerase chain reaction (RT-PCR) and
immunoblot analysis. Maximal levels of PGHS-2 induction were attained
when the cells were grown beyond confluence. The **osteosarcoma**
cells also secrete IL-1 alpha, IL-1 beta and TNF alpha in the culture
medium. PGHS-2 expression was inducible by the exogenous addition of
these cytokines as well as conditioned media from auto-induced cultures
and inhibitable by treatment with dexamethasone. In contrast,
undifferentiated U937 cells selectively express PGHS-1 as analyzed by
RT-PCR and Western blotting. The effects of non-steroidal
anti-inflammatory drugs (NSAIDs) on the cellular PGE2 production mediated
by each isoform of human PGHS were determined using **osteosarcoma**
and undifferentiated U937 cells. When cells were preincubated with
inhibitors to allow time-dependent inhibition prior to arachidonic acid
stimulation, NS-398, CGP 28238, L-745,337, SC-58125 all behaved as potent
(IC50 = 1-30 nM) and selective inhibitors of PGHS-2, in contrast to
indomethacin, flurbiprofen or diclofenac which are potent inhibitors of
enzymes. DuP-697 and sulindac sulfide were also potent inhibitors of
PGHS-2 but both compounds inhibited cellular PGHS-1 activity at higher
doses (IC50 = 0.2-0.4 microM). Time-dependent inhibition of PGE2
production in **osteosarcoma** cells was observed for indomethacin,
diclofenac and etodolac. The synthesis of PGE2 by U937 cells was strongly
dependent on exogenous arachidonic acid (100-fold stimulation) whereas
confluent **osteosarcoma** cells also produced PGE2 without
exogenous stimulus (7-fold stimulation by arachidonic acid).
Osteosarcoma cells grown beyond confluence released more PGE2 from
endogenous substrate than arachidonic acid stimulated undifferentiated
U937 cells. These results indicate that **osteosarcoma** cells
selectively express PGHS-2 with an autocrine regulation and effective
utilization of endogenous arachidonic acid for PGE2 synthesis.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 1995:339482 CAPLUS
DOCUMENT NUMBER: 122:105655
TITLE: Preparation of 2-substituted-3,4-di(aryl)thiophene
cyclooxygenase inhibitors

INVENTOR(S): Gauthier, Jacques Yves; Leblanc, Yves; Prasit,
Petpiboon
PATENT ASSIGNEE(S): Merck Frosst Canada Inc., Can.
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9426731	A1	19941124	WO 1994-CA264	19940511
W: AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KR, KZ, LK, LV, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, TT, UA, US, UZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2161789	AA	19941124	CA 1994-2161789	19940511
AU 9467184	A1	19941212	AU 1994-67184	19940511
PRIORITY APPLN. INFO.:			US 1993-61354	A 19930513
			WO 1994-CA264	W 19940511

OTHER SOURCE(S): MARPAT 122:105655

AB The title compds. [I; R1 = H, halogen, CN, NO2, CF3, C1-6 alkyl; R2 = C3-6 alkyl, (un)substituted Ph, (un)substituted heteroaryl; R3 = SO2CH3, S(O)(NH)CH3, SONH2, SO2NH2; R4 = H, halogen, CO2H, CF3], useful as **cyclooxygenase** inhibitors, are prepared and I-containing formulations claimed. Thus, 3-(4-fluorophenyl)-4-(4-sulfamoylphenyl)thiophene was prepared and demonstrated 95% inhibition of PGE2 formation by **osteosarcoma** (143.98.2) cells at 100 nM.



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☐ 1: Inflamm Res. 1997 Feb;46(2):51-9.

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**Characterization of autocrine inducible prostaglandin H synthase-2 (PGH 2) in human osteosarcoma cells.****Wong E, DeLuca C, Boily C, Charleson S, Cromlish W, Denis D, Kargman S, Kennedy BP, Ouellet M, Skorey K, O'Neill GP, Vickers PJ, Riendeau D.**

Department of Biochemistry and Molecular Biology, Merck Frosst Centre for Therapeutic Research, Pointe-Claire-Dorval, Quebec, Canada.

The human osteosarcoma 143.98.2 cell line was found to express high levels of prostaglandin synthase-2 (PGHS-2) without detectable levels of prostaglandin synthase-1 (PGHS-1) as measured by reverse transcriptase-polymerase chain reaction (RT-PCR) and immunoblot analysis. Maximal levels of PGHS-2 induction were attained when the cells were grown beyond confluence. The osteosarcoma cells also secrete IL-1 alpha, IL-1 beta and TNF alpha in the culture medium. PGHS-2 expression was inducible by the exogenous addition of these cytokines as well as conditioned media from auto-induced cultures and inhibitable by treatment with dexamethasone. In contrast, undifferentiated U937 cells selectively express PGHS-1 as analyzed by RT-PCR and Western blotting. The effects of non-steroidal anti-inflammatory drugs (NSAIDs) on the cellular PGE2 production media by each isoform of human PGHS were determined using osteosarcoma and undifferentiated U937 cells. When cells were preincubated with inhibitors to allow time-dependent inhibition prior to arachidonic acid stimulation, NS-398, CGP 28238, L-745,337, SC-58125 all behaved as potent ($IC_{50} = 1-30$ nM) and selective inhibitors of PGHS-2, in contrast to indomethacin, flurbiprofen or diclofenac which are potent inhibitors of PGHS-1. DuP-697 and sulindac sulfide were also potent inhibitors of PGHS-2 but both compounds inhibited cellular PGHS-1 activity at higher doses ($IC_{50} = 0.2-0.4$ microM). Time-dependent inhibition of PGE2 production in osteosarcoma cells was observed for indomethacin, diclofenac and etodolac. The synthesis of PGE2 by U937 cells was strongly dependent on exogenous arachidonic acid (100-fold stimulation) whereas confluent osteosarcoma cells also produced PGE2 without exogenous stimulus (7-fold stimulation arachidonic acid). Osteosarcoma cells grown beyond confluence released more PGE2 from endogenous substrate than arachidonic acid stimulated undifferentiated U937 cells. These results indicate that osteosarcoma cells selectively express PGHS-2 with an autocrine regulation and effective utilization of endogenous arachidonic acid for PGE2 synthesis.

PMID: 9085144 [PubMed - indexed for MEDLINE]

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#2	Search osteosarcoma Field: Title, Limits: Publication Date from 1970 to 1992	10:55:02	<u>20</u>
#1	Search cyclooxygenase OR COX Field: Title, Limits: Publication Date from 1970 to 1992	10:54:39	<u>8</u>

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